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| 10/775,510   | 02/10/2004    | Denise Marie Beachy  | J3711(C)            | 1049             |
| 201  | 7590          | 09/17/2009           | EXAMINER            |                  |
| UNILEVER PATENT GROUP<br>800 SYLVAN AVENUE<br>AG West S. Wing<br>ENGLEWOOD CLIFFS, NJ 07632-3100 |               |                      | CHUI, MEI PING      |                  |
| ART UNIT   | PAPER NUMBER  |                      |                     |                  |
|  |               |                      | 1616                |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentgroupus@unilever.com

|                              |                                      |                                      |
|------------------------------|--------------------------------------|--------------------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/775,510 | <b>Applicant(s)</b><br>BEACHY ET AL. |
|                              | <b>Examiner</b><br>MEI-PING CHUI     | <b>Art Unit</b><br>1616              |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 01 May 2009.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1 and 3-24 is/are pending in the application.

4a) Of the above claim(s) 3,5,9-11,14,15,17 and 21 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,4,6-8,12,13,16,18-20 and 22-24 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_

***DETAILED ACTION***

***Status of Action***

Receipt of Amendments/Remarks filed on 05/01/2009 is acknowledged. Claims 1, 3-24 are pending in this application. Claims 1, 12-13, 24 have been currently amended; claim 2 has been previously cancelled; claims 3, 5, 9-11, 14-15, 17, 21 have been previously withdrawn.

***Status of Claims***

Accordingly, claims **1, 4, 6-8, 12-13, 16, 18-20, 22-24** are presented for examination on the merits for patentability as they read upon the elected subject matter and claims 3, 5, 9-11, 14-15, 17, 21 directed to non-elected invention are withdrawn

Rejection(s) not reiterated from the previous Office Action are hereby withdrawn. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

***DOUBLE PATENTING***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g.,

*In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 1, 6-8, 12, 16, 18-20 and 22-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19, 21-26, 29-43 of co-pending U.S. Patent Application No. 11/316,596.**

Instant claim 1 is directed to an anhydrous antiperspirant composition comprising: (i) a particulate antiperspirant active, (ii) a water-immiscible carrier fluid comprises an aryl substituted siloxane and, (iii) a gellant or structurant for the carrier fluid.

Conflicting claim 1 of co-pending U. S. Patent Application No. 11/316,596 also is directed to an anhydrous antiperspirant composition comprising: (i) a particulate antiperspirant active, (ii) a water-immiscible carrier fluid comprising non-volatile silicone oil, and (iii) a fiber-forming amide gellant.

Instant and conflicting claim 1 differ in that the instant claim 1 recites the carrier fluid comprises an aryl substituted siloxane which satisfies the general formula 1:  $R^1R^A_2Si-O-[SiR^2R^A-O]_n-SiR^3R^A_2$ , in which  $n = 0$  to 2 and  $R^1, R^2, R^3$  each independently represents  $R^4$  (diphenylethyl group); but the conflicting claim 1 recites the carrier fluid comprises a non-volatile silicone oil. However, conflicting claim 9 of the co-pending application further recites that the non-volatile silicone oil, according to claim 1, comprises an aryl substituted siloxane which satisfied the general formula:  $R^1R^A_2Si-O-[SiR^2R^A-O]_n-SiR^3R^A_2$ , in which  $n = 0$  to 2 and  $R^1, R^2, R^3$  each independently represents  $R^4$  of the formula  $-CH_2-C(Ph)(R^B)(R^5)(Ph)$ , wherein  $R^B$  is H and  $R^5$  is zero.

Therefore, one of ordinary skill in the art, at the time the claimed invention was made, would have readily recognized that claims 1, 16, 18-20 and 22-23 in the instant application embrace the claims 1-19, 21-26, 29-43 of co-pending U.S. Patent Application No. 11/316,596, thus they are not patentability distinct.

**The provisional rejection with respect to claims 1, 6-8, 12, 16, 18-20 and 22-23, on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19, 21-26, 29-43 of co-pending U.S. Patent Application No. 11/316,596, is maintained.**

*Response to Arguments*

Applicants' arguments filed on 05/01/2009 have been fully considered but they are not persuasive.

Applicants argue that the amended claims of co-pending '596 require a segregation inhibitor that is an alkylene-arylene block copolymer in a ratio to fiber-forming amide gellant of from 1:1 to 3:1. As noted in such amendment, the combination of segregation inhibitor and fiber-forming gellant set forth in the '596 claims minimizes the issues of antiperspirant particle segregation that can occur during production when a fiber-forming amide gellant is employed. There is nothing in the subject claims that discloses or suggests compositions the use of segregation inhibitor as described by the '596 claims, nor is there any disclosure of the ratio of segregation- inhibitor to fiber-forming gellant required by the '596 claims (Remarks: page 10).

The argument is not persuasive because the instant claims are written using the transitional term "comprising", which is inclusive or open-ended and does not exclude additional, unrecited elements. In the instant case, even though the instant claims do not recite the use of segregation inhibitor, the use of "comprising" transitional term of art in claim language which means that the named elements are essential (the antiperspirant), but other elements (segregation inhibitor) may be added and still form a construct within the scope of the claim (see MPEP 2111.03).

Applicants are also reminded that the "provisional" double patenting rejection should continue to be made by the examiner in each application as long as there are conflicting claims in more than one application unless that "provisional" double patenting rejection is the only rejection remaining in one of the applications." See MPEP 822.01. Since the double patenting

rejection is not the only rejection in the instant application; therefore, the double patenting rejection is maintained.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**(1) Claims 1, 6-8, 12, 16, 18-20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGlone et al. (U. S. Patent No. 6,503,492) in view of Chuah et al. (U. S. Patent Application Publication No. 2004/0213748, which is equivalent to WO 03/005977, published on 01/23/2003).**

***Applicant Claims***

Applicants claim an anhydrous antiperspirant composition, in the form of a cream, semi-solid or a solid, comprising: (i) a particulate antiperspirant active, i.e. aluminum/zirconium chlorohydrate complex with amino acid, (ii) a water-immiscible carrier fluid comprises an aryl

substituted siloxane, wherein the carrier fluid comprises an aryl substituted siloxane which satisfies the general formula 1:  $R^1R^A_2Si-O-[SiR^2R^A-O]_n-SiR^3R^A_2$ , in which n = 0 to 2 and  $R^1$ ,  $R^2$ ,  $R^3$  each independently represents  $R^4$  (diphenylethyl group), and (iii) a gellant or structurant for the carrier fluid, i.e. N-acyl amino acid amides and esters.

*Determination of the scope and content of the prior art*  
*(MPEP 2141.01)*

McGlone et al. teach an antiperspirant cosmetic composition, suitable for topical application, comprising (i) an antiperspirant active, i.e. an aluminium/zirconium complex, (ii) a carrier for the antiperspirant active (column 3, lines 15-21). More specifically, McGlone et al. teach that the antiperspirant active can be aluminum/zirconium complexes, i.e. aluminum/zirconium chlorohydrate complex with glycine, which presents from 1 % to 35 % by weight of the composition (column 5, lines 12-29; column 14, line 34; and Table 10, lines 33-34 and 58).

McGlone et al. also teach that the antiperspirant active can be present in particulate form, whereupon it is suspended in a suitable water-immiscible carrier fluid, and which can be structured or thickened to produce a cream (soft solid) or solid (column 5, lines 31-34 and column 6, lines 12-16). In addition, McGlone et al. teach that the carrier material, which can be a fluid or a mixture of fluid, is often selected according to the physical form of the cosmetic composition and can be selected to provide desirable physical and sensory properties, i.e. moisturizing effect, for the cosmetic products (column 6, lines 21-23 and 25-26). Carrier materials, which act as emollients, can be volatile or non-volatile, and can be present in an amount of 5 % to 90 % by weight of the composition (column 5, line 62-64, and column 6, lines

21-22). McGlone et al. teach that non-volatile silicones, i.e. polyalkylarylsiloxanes including polymethylphenylsiloxanes, are useful as carrier materials to provide desirable properties (column 6, lines 54-58).

McGlone et al. further teach that the structurant can be a fiber-forming gellant, i.e. N-acyl amino acid amides and esters, which includes N-lauroyl-L-glutamic acid di-n-butylamide or lanosterol (column 7, lines 20-24), presents in an amount from 0.1 to 25 %, preferably from 1 % to 15 % by weight (column 7, lines 47-55). However, McGlone et al. also teach that the amount of structurant that can be employed will depend upon the viscosity of a fluid formulation or extend of hardness of a solid formulation that the producer wishes to attain, and the chemical nature of the structurant or thickening agent (column 7, lines 47-50).

*Ascertainment of the difference between the prior art and the claims*  
**(MPEP 2141.02)**

- (1) McGlone et al. do not specifically teach that the siloxane carrier is substituted with diphenyethyl group.
- (2) McGlone et al. do not teach the antiperspirant composition has hardness at least 0.5 N/mm<sup>2</sup> by sphere indentation. The deficiencies are cured by Chuah et al.

Chuah et al. teach an anhydrous antiperspirant formulation, in the form of a soft solid, comprising (i) a particulate antiperspirant active present from 5 % to 30 % by weight, (ii) an anhydrous carrier fluid in an amount of from 50 % to 85 % by weight, and (iii) a structurant system for the anhydrous carrier fluid (page 1: [0007-0008]).

Chuah et al. teach that the soft solid formulation is capable of being extruded through a narrow aperture in a dispenser head under application of low pressure and has a hardness of from  $3 \times 10^{-3}$  N/mm<sup>2</sup> (0.003 N/mm<sup>2</sup>) as measured by a sphere indentation technique (page 1: [0012]). Chuah et al. also suggest that antiperspirant formulations in the form of a roll-on, a soft solid, a cream or a firm stick are known in the art, and they are formulated into different forms, depending on consumers' preferences (page 1: [0003], lines 1-9).

Chuah et al. also teach that the carrier fluid used in the antiperspirant formulation can be non-volatile silicone oils, i.e. linear silicone oils which contain a high proportion of phenyl substituents (page 3: [0035], lines 6-8).

Chuah et al. further teach that the structurant system for the anhydrous carrier fluid can comprise a co-structurant, which preferably is a fiber-forming structurant including N-acyl amino acid amides and esters, i.e. N-lauroyl-L-glutamic acid di-n-butylamide (page 4: [0065]-[0073]).

Chuah et al. teach that suitable antiperspirant actives, i.e. aluminium/zirconium chlorhydrates complex with an amino acid glycine, can be used in the formulation (page 7: [0099], [0103-0104]). Chuah et al. also teach that some antiperspirant actives are produced in the form of dense particles and some are produced in the form of hollow particles that have been milled; however, the selection of the one with dense particles or the one with hollow particles is depended on the desired formulation whether is a translucent formulation or is an opaque formulation (page 7: [0105]).

Chuah et al. point out that the composition, which employs a structurant system in a water-immiscible carrier fluid would provide benefits, such as increases thermal stability of the formulation, increases optical clarity of the formulation, and reduce the amount of structurant system to be employed (page 1: [0011]).

**Importantly**, Chuah et al. teach that a significant factor in determining whether a formulation is translucent or opaque is the difference between the refractive index of the carrier mixture and that of the suspended antiperspirant salt. The mismatch in refractive index can be controlled by a number of treatments to the antiperspirant active and by suitable selection of the carrier fluids (page 7, [0109]). Chuah et al. teach that one way to increase the refractive index of the silicone carrier fluid is by increasing the proportion of aromatic contents relative to aliphatic content (page 7, [0109]). Chuah et al. then teach that even though if the refractive index of the carrier fluid and the suspended antiperspirant active do not match exactly, as long as the refractive index difference between these two constituents falls within the range of 0.003 to 0.08 units, translucency on extrusion through narrow apertures can be obtained. Therefore, it is desirable that the mismatch be minimized within the range of not more than 0.11 units (page 7: [0110]).

*Finding of prima facie obviousness Rational and Motivation*

*(MPEP 2142-2143)*

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to combine the teaching of McGlone et al. and Chuah et al. to arrive at the instant invention.

One of ordinary skill would have been motivated to follow the guidance of McGlone et al. and Chuah et al. to produce an antiperspirant composition, which comprises an antiperspirant active aluminium/zirconium complex and a water-immiscible alkyarylsiloxane carrier fluid that provides desirable cosmetic effects. One of ordinary skill in the art also would have been motivated to modify the refractive index of the alkyarylsiloxane carrier fluid to a desired level by increasing the aromatic content of the carrier fluid, so that it can closely match with the refractive index of the selected antiperspirant active based on the desired optical clarity of the antiperspirant product, as taught by Chuah et al.

In addition, one of ordinary skill in the art also would have been motivated to adjust the amount of structurant or thickening agent to a desirable level to obtain the suitable hardness for the product, depending on the desirable form of the product that the manufacturer wishes to attain, as taught by McGlone et al. and Chuah et al.

The combine references teach the claimed antiperspirant composition with the concept of increasing the number of aryl group in the structure of a siloxane carrier fluid would increase its refractive index, and the refractive index matching between an antiperspirant active and a carrier fluid would affect the transparency property; therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**(2) Claim 4 is rejected under 35 U. S. C. 103(a) as being unpatentable over McGlone et al. (U. S. Patent No. 6,503,492) and Chuah et al. (U. S. Patent Application Publication No. 2004/0213748) combined, and in view of Nye et al. (WO 00/27348).**

*Applicants Claim*

Applicants claim an anhydrous antiperspirant composition comprising (i) a particulate antiperspirant active, (ii) a water-immiscible carrier fluid comprises an aryl substituted siloxane, wherein the carrier fluid comprises an aryl substituted siloxane which satisfies the general formula 1:  $R^1R^2Si-O-[SiR^2R^A-O]_n-SiR^3R^A_2$ , in which  $n = 0$  to  $2$  and  $R^1$ ,  $R^2$ ,  $R^3$  each independently represents a capping group:  $\alpha$ -methylstyrene dimer ( $R^C$ ) and (iii) a gellant or structurant for the carrier fluid.

*Determination of the scope and content of the prior art*  
*(MPEP 2141.01)*

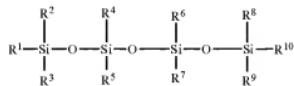
The teachings of McGlone et al. and Chuah et al. have been set forth above. Essentially, McGlone et al. and Chuah et al. teach an antiperspirant composition comprising an antiperspirant active and non-volatile alkylarylsiloxane carrier materials for suspending the antiperspirant active.

*Ascertainment of the difference between the prior art and the claims*  
*(MPEP 2141.02)*

McGlone et al. and Chuah et al. do not teach that the alkylarylsiloxane carrier materials are substituted with a residue of  $\alpha$ -methyl styrene dimer. However, the deficiency is cured by the teaching of Nye et al.

Nye et al. teach a personal care composition comprising an aralkylsiloxane component to enhance the shine, emolliency and lubricity properties of the personal care composition, as well

as aids in visually masking the inorganic components comprised in the composition (page 1: lines 112-17). Nye et al. teach the aralkylsiloxane component has a structure as follows:



Nye et al. also teach that the aralkylsiloxane component is made by contacting a silylhydride-functional polysiloxane with a terminally unsaturated arylalkene, i.e. styrene, to produce an aralkylsiloxane containing  $\alpha$ -methyl styrene group in the structure (page 2: formula I; page 5: lines 19-23 and page 8: Example). Nye et al. also teach that the aralkyl content of the aralkylsiloxane is selected to provide a refractive index of from 1.40 to 1.50 (page 5: lines 9-15).

*Finding of prima facie obviousness Rational and Motivation*

*(MPEP 2142-2143)*

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to follow the guidance of McGlone et al. and Chuah et al., and further in view of Nye et al. to arrive at the instant invention.

One of ordinary skill would have been motivated to utilize arylalkenes, i.e. styrene group, to produce an aralkylsiloxane compound containing  $\alpha$ -methyl styrene residue(s) in the structure, dependent on the desired refractive index of the aralkylsiloxane compound the producer wishes to attain.

From the teaching of the references, one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the

invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

- (1) The previous rejection with respect to claims 1, 6-8, 12, 16, 18-20 and 22-24, under 35 U.S.C. 103(a) as being unpatentable over McGlone et al. (U. S. Patent No. 6,503,492) in view of Chuah et al. (U. S. Patent Application Publication No. 2004/0213748, which is equivalent to WO 03/005977, published on 01/23/2003), is maintained.
- (2) The previous rejection with respect to claim 4, under 35 U. S. C. 103(a) as being unpatentable over McGlone et al. (U. S. Patent No. 6,503,492) and Chuah et al. (U. S. Patent Application Publication No. 2004/0213748) combined, and in view of Nye et al. (WO 00/27348), is maintained.

*Response to Arguments*

Applicants' arguments filed on 05/01/2009 have been fully considered but they are not persuasive.

Applicants argue that the non-volatile silicone oils DC704<sup>TM</sup> mentioned in Chuah et al. are methylphenylsiloxanes in which there is from 0.5 to 1.2 phenyl groups per methyl group. DC704<sup>TM</sup> is not the highly diphenylethyl-substituted silicone oil of the subject claims. Therefore, neither Chuah et al. nor in McGlone et al., nor in Nye et al. discloses the subject diphenylethyl-substituted siloxanes. Moreover, Chuah et al., teaches lower levels of silicone oil than that required by the amended claims (Remarks: page 7-8). Applicants also pointed out the comparative examples in Tables 3-4, which showed when composition contained the carrier fluid was 100 % CS1 (non-volatile silicone oil DC704<sup>TM</sup> with G2 gellant) had a Tg of 98 °C, whereas

the compositions contained diphenylethyl substituted siloxane (NS-124 or NS-065) had a Tg values of 38 °C and 55 °C, respectively. Likewise, the composition contained mixed carrier fluid (CS1 with G2 gellant) had a Tg of 58 °C, whereas the compositions contained the diphenylethyl substituted siloxanes (NS-124, NS-053, NS-078, NS-065 or NS-068) had a Tg of 25 to 36 °C. In Table 4: it showed the stick compositions made with CS1 (DC704<sup>TM</sup>) obtained a pour temperature 85 °C, where the compositions made with NS-053, NS-065 or NS-068 obtained a pour temperature ranging from 65-67 °C (see Remarks: page 8-9).

The arguments are not persuasive. Although the prior art Chuah et al. teach the use of non-volatile phenyl-substituted silicone oil as the carrier fluid, which is not diphenylethyl-substituted; it teaches an important refractive index matching concept that appears to be also the objective of the instant invention. Chuah et al. point out that a significant factor in determining whether a formulation is translucent or opaque is the difference between the refractive index of the carrier mixture and that of the suspended antiperspirant salt can be controlled by a number of treatments to the antiperspirant active and by suitable selection of the carrier fluids (page 7, [0109]). Chuah et al. teach that one way to increase the refractive index of the silicone carrier fluid is by increasing the proportion of aromatic contents relative to aliphatic content (page 7, [0109]). Chuah et al. then teach that even though if the refractive index of the carrier fluid and the suspended antiperspirant active do not match exactly, as long as the refractive index difference between these two constituents falls within the range of 0.003 to 0.08 units, translucency on extrusion through narrow apertures can be obtained. Therefore, it is desirable that the mismatch be minimized within the range of not more than 0.11 units (page 7: [0110]). It is noted that the **instant claim 16** recites the composition in which the carrier fluid and

suspended antiperspirant active have refractive index matching within 0.005 units. Therefore, one of ordinary skill in the art who reads the teaching of McGlone et al. and Chuah et al. would be motivated to add the quantity of the carrier suggested by McGlone et al. for the antiperspirant active, and then modifies (increases) the level of aromatic content of the siloxane carrier suggested by Chuah et al., if a higher refractive index value of the carrier fluid is desired for matching with the selected antiperspirant active.

With respect to the claimed diphenylethyl-substituted siloxanes have lower processing temperature compare to the phenyl-substituted siloxanes taught by Chuah et al., the concept of modifying the physical property, i.e. the glass transition temperature of a silicone material, is known in the art, as evidenced by Verbruggen et al. (U. S. Patent Application Publication No. 2003/0162929).

Verbruggen et al. teach the concept of incorporating refractive index modifying groups chemically bonded to a polysiloxane backbone via alkanediyl-bridge to produce a high refractive index siloxane copolymers, which are suitable for contact-lens and cosmetic applications that the materials of the products can be beneficially applied (page 1: [0002], [0020], [0108]).

Verbruggen et al. point out that it is generally known in the art silicone materials with higher refractive index can be obtained by increasing the phenyl content of silicone (co)polymer, but the disadvantage of this technique is it reduces flexibility of such modified silicone polymers and increases the glass transition temperature (**T<sub>g</sub>**) of the polymers, making it more hard and brittle and less flexible over a wide temperature range (page 1: [0008], [0009], [0010], lines 1-11). Verbruggen et al. also teach that one of the solutions known in the art to overcome such hurdle, in terms of reducing the glass transition temperature (**T<sub>g</sub>**) and increases the flexibility of

the phenyl-modified silicone materials, is to link the phenyl-groups (or named as refractive index modifying groups) to the silicon-oxygen backbone via alkanediyl-bridges (page 1: [0012], lines 1-11).

Verbruggen et al. further teach their surprising finding in that the refractive index of siloxane polymers is increased considerably without compromising the mechanical properties of the material, when the refractive index modifying groups are chemically bonded to the siloxane backbone via alkanediyl-bridges in a clustered configuration, wherein one alkanediyl-bridge binds at least two refractive index modifying groups to said backbone and wherein one of the suitable refractive index modifying group can be diphenylethyl group (page 2: [0016], [0020], [0021], lines 1-4; page 4: [0055], line 4).

Therefore, Applicants' arguments with respect to the diphenylethyl-substituted siloxanes possess significant processing advantages over the prior art are not persuasive, and the rejections of record are maintained for the reasons as set forth above.

### ***Conclusion***

No claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication from the Examiner should direct to Helen Mei-Ping Chui whose telephone number is 571-272-9078. The examiner can normally be reached on Monday-Friday (7:30 am – 5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where the application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PRIVATE PAIR or PUBLIC PAIR. Status information for unpublished applications is available through PRIVATE PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the PRIVATE PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/H. C./  
Examiner, Art Unit 1616

*/Mina Haghightian/*  
Primary Examiner, Art Unit 1616